

THE TAXONOMY OF SOME INDO-PACIFIC MOLLUSCA

PART 13. WITH DESCRIPTION OF A NEW SPECIES

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Abstract. New geographical range extensions are recorded for *Neothais rugulosa* (Pease), *Engina mactanensis* Cernohorsky, *Peculator verconis* Iredale, *Oliva buelowi* Sowerby, and *Anachis clathrata* (Brazier) [nom. praecoc.]. *Nassarius* (*Plicarularia*) *gibbosulus* (Linnaeus) and *N. (P.) circumcinctus* (A. Adams), are recognized as valid species occurring sympatrically in Turkey. *Vexillum* (*Costellaria*) *martinorum* from the Philippines is described as a new species and *Mitra japonica* A. Adams, is elucidated on the basis of a lectotype designation.

Family MURICIDAE

Genus **Neothais** Iredale, 1912

Neothais Iredale, 1912, Proc. Malac. Soc. Lond. 10:223. Type species by OD *Purpura smithi* Brazier, 1889. Recent, S.W. Pacific.

Neothais rugulosa (Pease, 1868) (Figs. 1-3)

1868. *Sistrum rugulosum* Pease, Americ. J. Conch. 4(3)93, pl. 11, fig. 7.

1880. *Ricinula* (*Sistrum*) *chaidea* Duclos (pars), Tryon, Man. Conch. 2:187, pl. 58, fig. 247 only (non *Purpura chaidea* Duclos, 1832).

TYPE LOCALITY. Howland Is, Pacific Ocean.

Type specimens. No longer extant. The illustrated specimen from Pease (1868), pl. 11, fig. 7, given dimensions length 8.0 mm, width 5.0 mm, is here designated as the illustrated lectotype of *N. rugulosa* (Pease) [Fig. 1].

The species has not been reported on since being erroneously placed in synonymy of *Morula chaidea* (Duclos). A specimen matching Pease's lectotype has been collected at Lelepa landing, Efate I, Vanuatu, under coral in 3-4 m (*leg.* Dr R. Willan). The specimen is small, 8.0 mm in length, with 12 axial ribs and 2 spiral cords on the penultimate and 8 ribs and 5 cords on the body whorl and with additional rugose cords on the siphonal fasciole. The shell is white, aperture shining white, the columella is smooth and the outer lip is patulous and has 15 lirae in groups of 2-4. This appears to be a rare species with a Pacific distribution.

Family BUCCINIDAE

Genus *Engina* Gray, 1839

Engina Gray, 1839, Zool. Capt. Beechey's Voy. "Blossom", p.112. Type species by SD (Gray, 1847) *E.zonata* Gray, 1839 = *Purpura turbinella* Kiener, 1836. Recent, Caribbean.

***Engina mactanensis* Cernohorsky, 1985** (Fig.4)

1984. *Cantharus lanceola* Kuroda & Habe, Sharabati, Red Sea shells, pl.21, fig.10 (non *Enzinopsis lanceolata* Kuroda & Habe, 1971).

1985. *Engina mactanensis* Cernohorsky, Rec. Auckland Inst.Mus. 22:53, figs.11-16.

TYPE LOCALITY. Punta Engano, Mactan I, Cebu, Philippines.

Since the original description of the species from the Philippines (Cernohorsky 1985), I have examined specimens from near Rabaul, New Britain, Papua New Guinea, collected by Mr J. Beasley at diving depth. The species has also been recorded from the Red Sea by Sharabati (1984) under the name "*Enzinopsis lanceola*" (error for *lanceolata*). The true *Engina lanceolata* Kuroda & Habe, is considerably different to *E.mactanensis* and is more similar to *E.curtisiana* (E.A. Smith, 1884). Two specimens of *E.mactanensis* were also collected at Moen I, Truk lagoon, Caroline Is, in 2-4 m (R.Salisbury, in litt.), and the species appears to have a wide Indo-Pacific distribution.

Family COLUMBELLIDAE

Genus *Anachis* H. & A. Adams, 1853

Anachis H. & A. Adams, 1853, Gen.Rec.Moll. 1:184. Type species by SD (Tate, 1875) *Columbella scalarina* Sowerby, 1832. Recent, Mexico to Panama.

***Anachis clathrata* (Brazier, 1877) [nom. praeocc.]** (Figs.5-8)

1877. *Columbella (Anachis) clathrata* Brazier, Proc.Linn.Soc. N.S.W., 1:229 (non Geinitz, 1874).

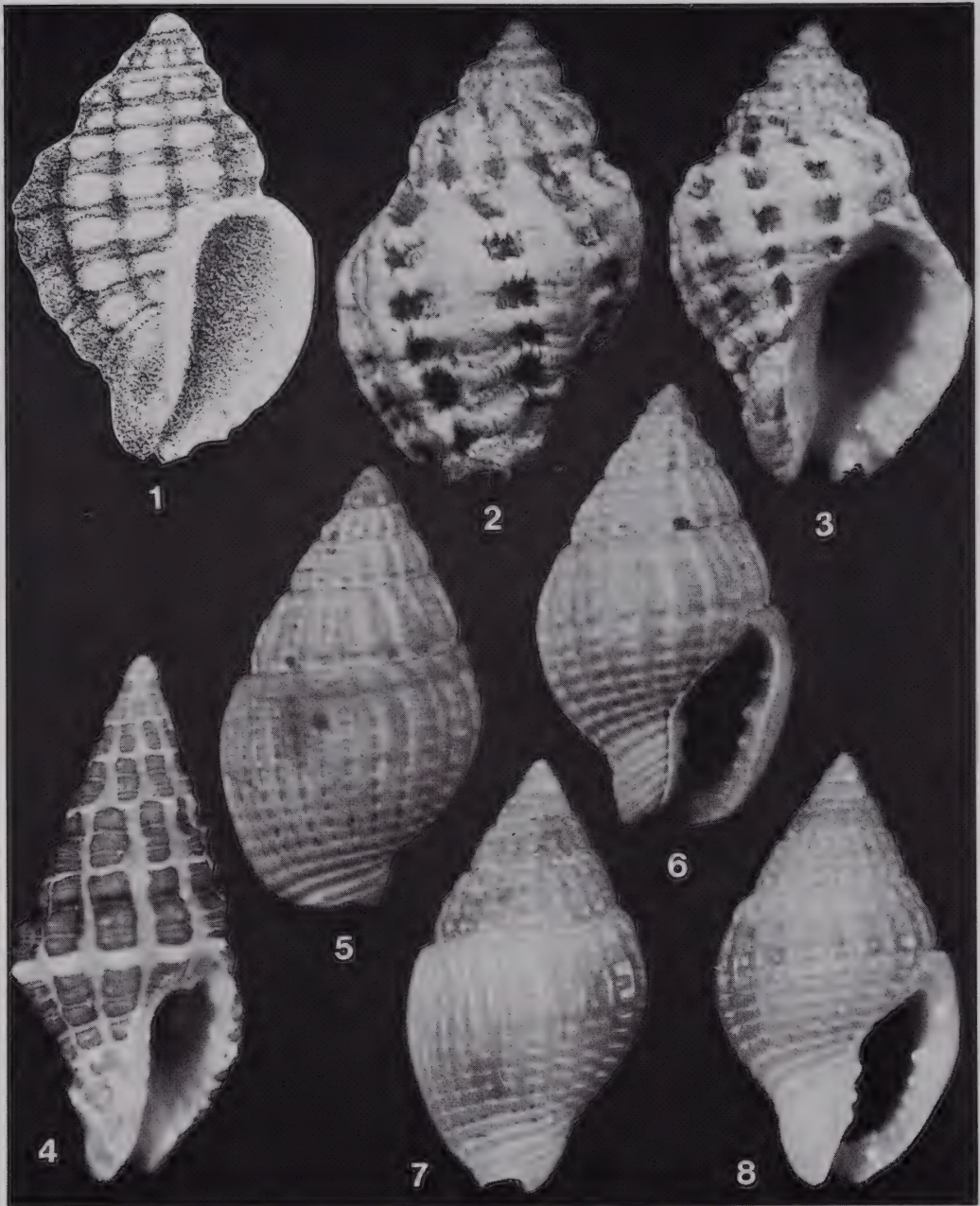
1883. *Columbella (Seminella) clathrata* Brazier, Tryon, Man. Conch. 5:173 (not illustrated).

1901. *Columbella clathrata* Brazier, Hedley, Rec.Austral.Mus.4(3):123, pl.16, fig.6 (illustrated syntype).

TYPE LOCALITY. Katow, Papua New Guinea, 7 fathoms (= 12.8 m).

Type specimens. The 12 syntypes of *C. (A.) clathrata* mentioned by Brazier (1877) are now on permanent loan in the Australian Museum, Sydney (formerly in the Macleay Museum, Sydney), No. A-85. The largest specimen, which is probably the one illustrated by Hedley (1901), measures length 6.8 mm, width 4.0 mm (Figs.5,6).

Specimens of *Anachis clathrata* have recently been recovered from weed on a salt water pump frame of the Queensland Alumina Ltd. at South Trees Inlet, Port Curtis, Queensland, Australia, in about 3 m depth (*leg.* N. Trevor, 1982). Fresh specimens are yellowish-brown in colour with a teleoconch of $3\frac{3}{4}$ whorls and a protoconch of $3\frac{1}{2}$



Figs. 1-8. 1-3. *Neothais rugulosa* (Pease). 1. Type figure; 8.0 mm (from Pease 1868, pl. 11, fig. 7). 2, 3. Specimen from Efate I, Vanuatu; 8.0 mm. 4. *Engina mactanensis* Cernohorsky. Rabaul, Papua New Guinea; 10.7 mm. 5-8. *Anachis clathrata* (Brazier) [nom. praeocc.]. 5, 6. Syntype Austral. Mus. Sydney, No. A-85; 6.8 mm. 7, 8. Specimen from Port Curtis, Qld., Australia; 7.0 mm.

smooth embryonic whorls, 20 axial ribs on the penultimate and the same number on the body whorl, a sutural row of nodules on whorls, 2-3 spiral cords on the penultimate and 9 spirals on body whorl + 8 basal cords, outer lip with 6-7 denticles, columella with 2-3 denticles (Figs.7,8).

Columbella clathrata Brazier, 1877, is a primary homonym of *Columbella clathrata* Geinitz, 1874, from Cenomanian, U. Cretaceous deposits of Saxony (Geinitz 1871-75:264). No substitute name is proposed here for the homonymous *C.clathrata* since *Columbella brevissima* Hervier, 1899, from Lifu, New Caledonia, could prove to be conspecific with *C.clathrata* Brazier.

Family NASSARIIDAE Iredale, 1916

[Validation of the family name is pending with ICNZ — No. Z.N.(S.) 1893]

Genus **Nassarius** Duméril, 1806

Nassarius Duméril, 1806, Zool. Analytique p.166. Type species by SM (Froriep, 1806)
Buccinum arcularia Linnaeus, 1758. Recent, Indo-Pacific.

Subgenus **Plicarcularia** Thiele, 1929

Plicarcularia Thiele, 1929, Handb.syst. Weicht. 1:324. Type species by M *Nassa* (*Plicarcularia*)
thersites (Bruguière) = *Buccinum pullus* Linnaeus, 1758. Recent, Indo-Pacific.

A comparison between N. (P.) gibbosulus (Linnaeus) and N. (P.) circumcinctus (A. Adams)

Nassarius (Plicarcularia) gibbosulus (Linnaeus, 1758) (Figs.9,10)

1758. *Buccinum gibbosulum* Linnaeus, Syst.Nat. ed.10:737.
1798. *Cassis callosa* Röding, Mus. Bolten. p.28.

TYPE LOCALITY. Mediterranean Sea (*gibbosulus*); none (*callosa*).

Type specimens. A single type specimen of *N. (P.) gibbosulus* is in the Linnean collection, London.

Nassarius (Plicarcularia) circumcinctus (A.Adams, 1852) (Figs.11-14)

1852. *Nassa circumcincta* A.Adams, Proc.Zool.Soc.Lond. p.102.
1972. *Naytiopsis granum flammulata* Nordsieck, Arch.Moll. 102(4-6):238, textfig.39; 1975 Yaron, Conchiglie 11(1-2):34 (placed in synonymy of *N.circumcinctus* A.Adams) [non *Nassa flammulata* Preston, 1909; nec Schepman, 1911 = *Nassarius*].

TYPE LOCALITY. Red Sea (*circumcinctus*); Shiqmona Bay, Israel (*flammulata*).



Figs. 9-14. 9,10. *Nassarius (Plicarularia) gibbosulus* (Linnaeus). Kizkalesi, Turkey; 15.8 mm. 11-14. *N. (P.) circumcinctus* (A.Adams). 11,12. Lectotype B.M. (N.H.) No. 197322; 18.3 mm. 13,14. Specimen from Kizkalesi, Turkey; 12.5 mm.

Type specimens. Three syntypes of *N. (P.) circumcinctus* are in the British Museum (Nat.Hist.), London, No. 197322. The specimen measuring length 18.3 mm, width 9.8 mm, is here selected as the lectotype (Figs.11,12).

Kobelt (1878), Tomlin (1932), Nordsieck (1972) and other writers, placed *N. (P.) circumcinctus* in the synonymy of *N.gibbosulus*. Mienis (1980) commented on the reported occurrence of 39 specimens of *N.gibbosulus* and 10 specimens of *N.circumcinctus* from excavations of the royal Necropolis and the "Cellarka" tombs near Salamis, Cyprus, dating from the 6th to 4th century B.C. The author separated

the two species on features of a more slender shell, absence of a dorsal hump, truncated apex and different colour pattern in *N. circumcinctus*. The author also commented on the reported absence of *N. circumcinctus* in present day waters surrounding Cyprus, but mentioned that it was possible that both species still live today in Cyprus waters.

Specimens of both species were received from Kizkalesi, between Mersin and Silifke, Turkey, collected in 3-4 m on a sand substratum (*leg.* Mrs D. Schmidt, August 1985). *N. (P.) gibbosulus* was moderately uncommon but *N. (P.) circumcinctus* occurred in great numbers according to the collector and no intergrading specimens were found. *N. gibbosulus* is a slightly larger and broader species with more numerous conical spire whorls and a more distinct dorsal hump; the base colour is grey or greenish-brown, spotted or blotched with white or dark colours, spire whorls have 1-2 interrupted brown lines and the edge of the callus and the basal oblique cord are coloured orange to orange-brown. *N. (P.) circumcinctus* in comparison is slightly smaller, more elongate in form and compressed if viewed in profile, the dorsum has numerous, very fine axial growth-striae, the dorsal hump, when present, is more discreet, the spire whorls are fewer and shorter and the truncated apex has the embryonic whorls almost flat or they may terminate in a nipple; the base colour is a yellowish-brown with a darker brown overlay and some brown axial lines, the edge of the callus and the tip of the siphonal canal and body whorl suture are coloured dark brown and the spire whorls have small brown spots and short streaks. *N. (P.) gibbosulus* has a moderately broad and deep trough between the oblique dorsal basal cord and the tip of the siphonal canal, a feature which has not been seen in *N. (P.) circumcinctus*.

The type locality of "Red Sea" for *N. (P.) circumcinctus* is correct since the species has been introduced to the Red Sea from the Mediterranean. The species' occurrence in Turkey and the Mediterranean side of Israel, would strongly indicate the species presence in the interposing island of Cyprus. The description of the homonymous *Naytiopsis granum flammulata* Nordsieck, 1972, from Israel, has been based on a small juvenile individual of *N. (P.) circumcinctus*.

Family COSTELLARIIDAE

Genus *Vexillum* Röding, 1798

Vexillum Röding, 1798, Mus. Bolten., p. 138. Type species by SD (Woodring, 1928) *V. plicatum* Röding, 1798 = *Voluta plicaria* Linnaeus, 1758. Recent, Indo-Pacific.

Subgenus *Costellaria* Swainson, 1840

Costellaria Swainson, 1840, Treat. Malac. pp. 130, 320. Type species by M *Mitra rigida* Swainson, 1821 = *M. semifasciata* Lamarck, 1811. Recent, Indo-Pacific.

Vexillum (Costellaria) martinorum sp. n.

(Figs. 15-20)

Shell moderately small in size, up to 23.3 mm in length, fusiformly-elongate, width 26%-34% of length, dull in appearance, teleoconch of 6½-7¼ convex whorls, protoconch of 3 translucent embryonic whorls, sutures distinct. Early mature whorls



Figs. 15-20. *Vexillum (Costellaria) martinorum* sp. n. 15,16. Holotype AIM No. TM-1372; 22.7 mm. 17-20. Paratypes from Coamen I, Philippines. 17,18. Length 20.1 mm. 19. Length 20.7 mm. 20. Length 19.0 mm.

granulose, later whorls sculptured with flattish elevated spiral cords which number from 5-6 on the penultimate and 11-14 on the body whorl; sutures with 1-2 cords which are usually separated by a wider interspace than succeeding spiral cords. Axial sculpture consists of axial lirae which connect laterally compressed nodules on spiral cords, axials numbering from 24-37 on the penultimate whorl. Aperture narrow, about equal in height to the spire, height 48%-53% of length, interior with 7-14 distinct lirae which are prominent in more mature specimens, outer lip moderately thin, convex, columella not calloused and with 4-5 (usually 5) slanting folds, siphonal

fasciole with 6-8 close-set cords. Reddish-brown in colour, ornamented with nebulous cream-coloured axial streaks, some individuals with a white central band on body whorl, aperture white to rosy-white, columella white. Remains of a pale straw-coloured periostracum embedded in interspaces of spiral cords.

TYPE LOCALITY. Off Coamen I, western Bohol reef, Philippines, 183 - 207 m.

DISTRIBUTION. Known only from the Philippines.

Holytype. In the Auckland Institute and Museum No. TM-1372, length 22.7 mm, width 7.5 mm, height of aperture 11.1 mm; penultimate whorl, as viewed from the ventral side, with an oblique damage scar (Figs.15,16).

Paratypes. Paratypes from the type locality in coll. R Martin, Cebu City, Philippines. A total of 15 specimens have been examined.

V. (C.) martinorum is most closely similar to *V. (C.) vandervlerki* (Koperberg, 1931) from the Pliocene of Timor and also known living in deep water in the Philippines. The latter species, although also distinctly nodulose, has flat-sided whorls, more distinct axial ribs, very narrow interspaces between spiral cords which also lack axial lirae, and columellar folds which extend onto the siphonal canal. *V. (C.) vandervlerki* is also larger and is uniformly creamy-white under a brown periostracum.

The species is named for Mr & Mrs R. Martin, Cebu City, Philippines, whose diligent dredging operations in the Bohol Strait discovered not only this, but other noteworthy species.

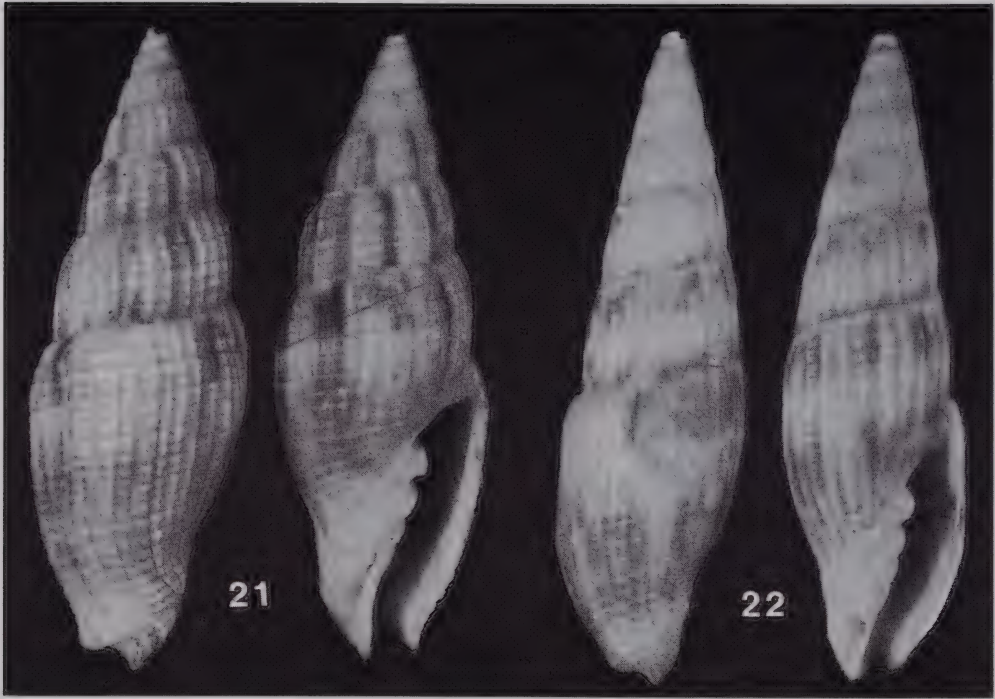
“*Mitra japonica*” A.Adams, 1864

(Figs.21,22)

1864. *Mitra japonica* A.Adams, J.Linn.Soc.Lond. 7:198; 1970 Cernohorsky, Bull.Auckland Inst.Mus. 8:35; 1985 Habe, Spec.Publ.Mukaishima Mar.Biol.Stat. No.232:10, pl.2, fig.2.

TYPE LOCALITY. Kino-o-Sima, Japan.

Type specimens. Two probable syntypes of *Mitra japonica* are in the British Museum (Nat.Hist.), London, No. 1967787. The larger, worn and faded syntype, which is conspecific with *Mitra pyramis* Wood, 1828, measures length 37.9 mm, width 10.4 mm, height of aperture 16.1 mm (Fig.22). The smaller worn and faded syntype, which is conspecific with *Vexillum (Costellaria) acupictum* (Reeve, 1844), is here selected as the lectotype of *Mitra japonica*. The dimensions of the lectotype are length 33.7 mm, width 11.4 mm, height of aperture 15.5 mm. The specimen has 7¼ whorls, the apex is broken, the penultimate whorl has 27 axial ribs and 7-8 spiral grooves, the body whorl c. 40 axial ribs and 14 spiral grooves, followed by 7 nodulose cords and 6 cords on the siphonal fasciole, 4 distinct and 1 very small columellar folds and 13 distinct lirae on the interior of the outer lip. The colour is a faded white, ornamented with faded brown axial streaks (Fig. 21).



Figs. 21,22. "*Mitra japonica*" A.Adams. 21. Lectotype B.M. (N.H.) No. 1967787; 33.7 mm [= *Vexillum (Costellaria) acupictum* (Reeve)]. 22. Syntype B.M. (N.H.) No. 1967787; 37.9 mm [= *Mitra pyramis* Wood].

Habe (1985) in his discussion of *Mitra japonica* A.Adams, did not select a lectotype for the species, nor did he mention the presence of 2 syntypes which not only were different species but belonged to different genera and families. Habe (1985) only illustrated the larger syntype which despite its worn appearance is still recognizable as the species *Mitra pyramis* Wood, 1828, belonging to the family Mitridae.

A.Adams' original description (Adams, 1864), is not at all helpful in determining which of the two specimens formed the basis of the description, and a composite diagnosis cannot be ruled out. Adams' placement of *Mitra japonica* in the Mitrinae and not the Turriculinae (= Costellariidae) where he placed other costellarid species, and the absence of mention of the apertural lirae, would favour a selection of the larger syntype as the lectotype. However, Adams' statement of the spire being of equal length to the aperture and the mention of "small longitudinal plicae and transverse lirae" would be applicable to the smaller syntype. The deciding factor in this lectotype selection has been the fact that *Mitra pyramis* has as yet not been recorded from Japan, whereas *Vexillum (Costellaria) acupictum* (Reeve) does live in Japan and specimens examined came from Mikawa Bay and Tosa Bay. The selection of the smaller syntype as the lectotype makes *Mitra japonica* A.Adams, 1864, a subjective synonym of *Vexillum (Costellaria) acupictum* (Reeve, 1844), in the family Costellariidae.

Family VOLUTOMITRIDAE

Genus *Peculator* Iredale, 1924

Peculator Iredale, 1924, Proc.Linn.Soc.N.S.W. 49(3):269. Type species by M *P.verconis* Iredale, 1924. Recent, S.E. Australia.

Peculator verconis Iredale, 1924

(Figs.23,24)

1924. *Peculator verconis* Iredale, Proc.Linn.Soc.N.S.W. 49(3):269, pl.34, fig.5; 1970 Cernohorsky, Bull.Auckland Inst.Mus. No.8:117, pl.14, fig.17 (illustrated holotype).

TYPE LOCALITY. Twofold Bay, N.S.W., Australia, 27-46 m.

Four specimens collected at St.38, N.W. of Rottness I, West Australia, 31°45'S & 115°09'E, in 144-150 m, by H.M.A.S. "Diamantina" on the 18-3-1972, have been examined. These specimens have been collected devoid of animal and are now deposited in the Australian Museum, Sydney, No.C-149483. They appear to be the first West Australian record of *P.verconis*.



Figs. 23,24. *Peculator verconis* (Iredale). N.W. of Rottness I, West Australia, 144-150 m; AMS No. C-149483. 23. Length 7.6 mm. 24. Immature specimen, length 7.1 mm.

Family OLIVIDAE

Genus *Oliva* Bruguière, 1789

Oliva Bruguière, 1789, Encycl.Méth.Hist.nat.vers 1:XV. Type species by SM (Lamarck, 1799)
Voluta oliva Linnaeus, 1758. Recent, Indo-Pacific.

Oliva buelowi Sowerby, 1889

(Fig.25)

1889. *Oliva buelowi* Sowerby, J.Linn.Soc.Lond.Zool. 20:395, pl.25, fig.3.

1969. *Oliva (Strephona) buloui* (sic) Sowerby, Zeigler & Porreca, Olive shells of the world p.66, pl.10, fig.16.

1972. *Oliva buloui* (sic) Sowerby, Hinton, Shells New Guinea & Indo-Pacific, p.50, pl.25, figs.39,40.

1978. *Oliva bulowi* (sic) Sowerby, Hinton, Guide shells Papua New Guinea p.34, figs.8,8a.

1982. *Oliva buloui* (sic) Sowerby, Abbott & Dance, Compendium Seashells p.192, fig.top row, second from left.

TYPE LOCALITY. New Britain, Papua New Guinea.

The species has been presumed to be endemic to Papua New Guinea, and only recently Abbott & Dance (1982) reported it from the Solomon Islands. This range is now extended farther east to Vanuatu, where specimens have been found at Havannah Harbour, Efate I, in 73 m (*leg.* T.Hamlyn-Harris).

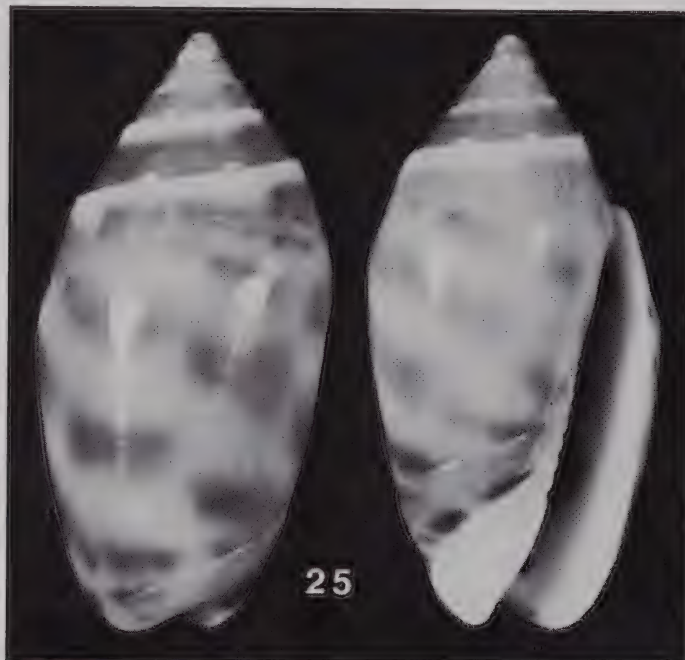


Fig.25. *Oliva buelowi* Sowerby. Havannah Harbour, Efate I, Vanuatu, 73 m; 21.2 mm.

The epithet "*buelowi*" has almost always been misspelt in literature. The species was named after Carl Bülow, Berlin, and Sowerby (1889) spelled it "*bülowi*". According to the Code of ICNZ (1985), Art.32(d)(i)(2), the Umlaut sign is deleted and the letter "e" is inserted after the vowel. The date of description has been reported as 1887 (Zeigler & Porreca 1969) or 1888 (Abbott & Dance 1982) but the correct publication date is December 1889.

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